**Homework 41H** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
**SSS and SAS** Period:\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!  
Directions:** Decide whether the congruence statement is true. *Explain* your reasoning.

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| --- | --- | --- | --- |
| 1) Δ*ABD* ≅ Δ*CDB* | 2) Δ*RST* ≅ Δ*RQT* | | 3) Δ*ABC* ≅ Δ*DEF* |
| 4) Use the given coordinates to determine if Δ*ABC* ≅Δ*DEF.*  *A*(1, 2), *B*(4, –3), *C*(2, 5), *D*(4, 7), *E*(7, 2), *F*(5, 10) | | 5) Use the given coordinates to determine if Δ*ABC* ≅Δ*DEF.*  *A*(1, 1), *B*(4, 0), *C*(7, 5), *D*(4, –5), *E*(6, –6), *F*(9, –1) | |
| 6) Complete the proof.  **GIVEN:** ≅,≅  *ADC*  *BC*  *CD*  *AB*  **PROVE:** Δ*ABC* ≅Δ*CDA*     |  |  | | --- | --- | | **Statements** | **Reason** | | 1. | * 1. **\_\_**?**\_\_** | | **2.** | 1. **\_\_**?**\_\_** | | **3.** | * 1. **\_\_**?**\_\_** | | 4. Δ*ABC* ≅ Δ*CDA* | * + 1. **\_\_**?**\_\_** | | | 7) Complete the proof.  **GIVEN:** ***,*** *D* is the midpoint of AC  **PROVE:** Δ*AB*D ≅ Δ*CBD*     |  |  | | --- | --- | | **Statements** | **Reason** | |  | * 1. **\_\_**?**\_\_** | | 1. *D* is the misdpoint of AC **.** | * + 1. **\_\_**?**\_\_** | | 1. ≅   *CD*  *AD* | * + - 1. **\_\_**?**\_\_** | | 1. ≅   *BD*  *BD* | * 1. **\_\_**?**\_\_** | | 1. Δ*ABD* ≅ Δ*CBD* | * + 1. **\_\_**?**\_\_** | | |

**Directions:** Decide whether enough information is given to prove that the triangles are congruent using the SAS Congruence Postulate.

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| 8) Δ*MAE*, Δ*TAE* | 9) *DKA*, Δ*TKS* | | 10) Δ*JRM*, Δ*JTM* |
| 11) Complete the proof.  **GIVEN:** *B* is the midpoint of .  *AE*  *B* is the midpoint of .  *CD*  **PROVE:** Δ*ABD* ≅ Δ*EBC*   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. *B* is the midpoint of .   *AE* | * 1. \_\_?\_\_ | | 1. \_\_?\_\_ | * 1. Definition of midpoint | | 1. *B* is the midpoint of .   *CD* | * 1. \_\_?\_\_ | | 1. \_\_?\_\_ | * 1. Definition of midpoint | | 1. *ABD* ≅ *EBC* | * 1. \_\_?\_\_ | | 1. Δ*ABD* ≅Δ*EBC* | * 1. \_\_?\_\_ | | | | |
| 12) Complete the proof.  *AB*  *CD*    **GIVEN:** || ,  *CD*  *AB*  **PROVE:** Δ*ABC* ≅ Δ*DCB*   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. ||   *CD*  *AB* | * 1. \_\_?\_\_ | | 1. *ABC* ≅ *DCB* | 1. \_\_?\_\_ | | *AB*  *CD*   | * + 1. \_\_?\_\_ | | *CB*  *CB*   | * + - 1. \_\_?\_\_ | | 1. Δ*ABC* ≅ Δ*DCB* | * + - * 1. \_\_?\_\_ | | |  | |